

In the Claims:

Please amend claims 1, 16-19, 21-25, 27-28, and 33-41, and cancel claims 20 and 29, all as shown below. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended): A ~~system~~ computer readable storage medium storing instructions for improved implementation of a J2EE connector architecture on an application server, the instructions comprising:

- a resource adapter for an Enterprise Information System;
- a set of system-level contracts between the resource adapter and an application server;
- a Common Client Interface capable of providing a client API for Java applications and development tools to access the resource adapter;

- a connection manager on the application server capable of managing and maintaining size of a pool of connections to the Enterprise Information System, wherein the connection manager matches a request for a new connection to the Enterprise Information System, through the resource adapter, with an existing and available managed connection in the pool of connections, and wherein the connection manager creates a plurality of managed connections when an existing and available managed connection is not found; and

- a set of packaging and development interfaces that provide the ability for resource adapters to plug into J2EE applications in a modular manner; and

- a deployment descriptor containing a configuration element for the resource adapter, the configuration element allowing a user to override default deployment values for the resource adapter.

2 – 15. (Cancelled)

16. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, further comprising:

- a deployment component adapted to automatically detect and deploy a resource adapter on the application server.

17. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, wherein:

the resource adapter further provides support for error logging and tracing.

18. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 17, further comprising:

a deployment descriptor containing a logging-enabled element capable of indicating whether logging is enabled, as well as a log-filename element capable of specifying the name of the file in which to write the logging information.

19. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, ~~further comprising:~~

~~[[a]] wherein the~~ connection manager ~~for enabling~~ enables the resource adapter to provide services specific to the resource adapter, the services being selected from the group consisting of connection pooling, error logging and tracing, and security management.

20. (Cancelled)

21. (Currently Amended): A ~~system~~ computer readable storage medium according to claim ~~19~~ 20, wherein:

the connection manager can create physical connections to the Enterprise Information System and the resource adapter is capable of having more than one connection manager instance per physical connection.

22. (Currently Amended): A ~~system~~ computer readable storage medium according to claim ~~19~~ 20, further comprising:

a deployment descriptor specific to the resource adapter allowing the resource adapter to be linked to a second resource adapter, the resource adapter capable of sharing resources with the second resource adapter, thereby preventing the duplication of resources and only requiring the resource adapter to modify a subset of resource adapter attributes.

23. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, further comprising:

a deployment descriptor for the resource adapter;

wherein the set of system-level contracts includes a connection management contract and the deployment descriptor contains connection pool parameters capable of setting parameters selected from the group consisting of: the initial number of managed connections the application server attempts to allocate at deployment time, the maximum number of managed connections the application server allows to be allocated at any one time, the number of managed connections the application server attempts to allocate when filling a request for a new connection, whether the application server attempts to reclaim unused managed connections to save system resources, the time the application server waits between attempts to reclaim unused managed connections, the frequency of time to detect and reclaim connections that have exceeded their usage time, and the amount of usage time allowed for a connection.

24. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, further comprising:

a deployment descriptor for the resource adapter and containing an initiating principal mapping, the mapping capable of being used at deployment time if connection pool parameters indicate that the application server should initialize connections.

25. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, further comprising:

a security principal map for each deployed resource adapter, the map providing a mechanism to define appropriate resource principal values for resource adapter and Enterprise Information System sign-on processing.

26. (Cancelled)

27. (Currently Amended): A ~~system~~ computer readable storage medium for improved implementation of a J2EE connector architecture on an application server, comprising:

a resource adapter for an Enterprise Information System;

a deployment descriptor containing deployment elements for the resource adapter;
a set of system-level contracts between the resource adapter and an application server, the set including a security management contract;

a password converter tool capable of being used with the security management contract to encrypt any passwords in the deployment descriptor;

a Common Client Interface capable of providing a client API for Java applications and development tools to access the resource adapter; and

a set of packaging and development interfaces that provide the ability for resource adapters to plug into J2EE applications in a modular manner; and

a deployment descriptor containing a configuration element for the resource adapter, the configuration element allowing a user to override default deployment values for the resource adapter.

28. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 27, wherein:

the password converter tool is further adapted to parse an existing deployment descriptor containing non-encrypted passwords and create a new deployment descriptor containing encrypted passwords.

29 - 32. (Cancelled)

33. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, wherein:

the connection manager creates each of the plurality of managed connections using the initiating principal and client request information contained in the request for a new connection.

34. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, wherein:

the connection manager attempts to recycle a managed connection from the connection pool if a maximum number of connections is reached.

35. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, wherein:

the connection manager monitors the activity of managed connections in the connection pool during the deployment of a resource adapter, the connection manager being capable of reducing the size of the connection pool if connection usage decreases and remains at the decreased level over a period of time.

36. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, wherein:

the connection manager automatically closes a managed connection that has exhausted its usage time.

37. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 1, wherein transaction level type supported by the resource adapter is specified by an element in a deployment descriptor.

38. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 37, wherein transaction level type supported by the resource adapter is specified as XA transaction, local transaction, or no transaction.

39. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 35, wherein an element in the deployment descriptor sets the frequency for calculating connection pool size reduction.

40. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 36, wherein an element in the deployment descriptor sets the frequency for calculating whether a connection has exceeded its usage time.

41. (Currently Amended): A ~~system~~ computer readable storage medium according to claim 36, wherein an element in the deployment descriptor sets the maximum usage time for a connection.